Index of Authors

Note. Entries marked with an asterisk (*) refer to communications made in title only.
Entries marked with a section mark (§) refer to contributions to Symposia.
Pages in *Proceedings of the Biochemical Society* are distinguished by P.

ABRAHAM, E. P. *see* SWALLOW, D. L. 39P
ABUL-FADL, M. A. M. Inhibition and activation of β-glucuronidase in urine 16P
ADCOCK, L. H. & GRAY, C. H. Metabolism of uniformly ^{14}C-labelled sorbitol in man 4P
ADCOCK, L. H. & GRAY, C. H. The metabolism of sorbitol in the human subject 554
ALBERT, A. The transformation of purines into pteridines 124
ALLISON, A. C. Properties of sickle-cell haemoglobin 212
ANSELL, G. B. & DOHMEN, H. The turnover of brain phospholipids during anaesthesia, chlorpromazine sedation and convulsions 1P
ANTIA, M., HOARE, D. S. & WORK, E. The stereoisomers of αε-diaminopimelic acid. 3. Properties and distribution of diaminopimelic acid racemase, an enzyme causing interconversion of the LL and *meso* isomers 448
ARNSTEIN, H. R. V. & CLUBB, M. E. The biosynthesis of penicillin. 5. Comparison of valine and hydroxyvaline as penicillin precursors 618
ARNSTEIN, H. R. V. & CRAWHALL, J. C. A study of the mechanism of penicillin biosynthesis using [α-^3H]- or [β-^3H]-cystine 18P
ASCHAFFENBURG, R. & DREWRY, J. Improved method for the preparation of crystalline β-lactoglobulin and α-lactalbumin from cow's milk 273
AYRES, P. J., BUDDLE, H. L., HEALD, P. J., MCILWAIN, H. & RODNIGHT, R. Apparatus designed for studying separated tissues 9P
AYRES, P. J., GARROD, O., SIMPSON, S. A. & TAIT, J. F. A method for the determination of aldosterone, cortisol and corticosterone in biological extracts, particularly applied to human urine 639
AYRES, P. J., HECHTER, O., SABA, N., SIMPSON, S. A. & TAIT, J. F. Intermediates in the biosynthesis of aldosterone by capsule strippings of ox adrenal gland 22P
AYRES, P. J., SIMPSON, S. A. & TAIT, J. F. A fluorescence method for the microanalysis of Δ^4-3-oxo steroids on paper chromatograms. *Addendum to*: A method for the determination of aldosterone, cortisol and corticosterone in biological extracts, particularly applied to human urine (Ayres, P. J., Garrod, O., Simpson, S. A. & Tait, J. F.) 647

BALDWIN, R. L. Boundary spreading in sedimentation-velocity experiments. 4. Measurement of the standard deviation of a sedimentation-coefficient distribution: application to bovine albumin and β-lactoglobulin 490
BALDWIN, R. L. Boundary spreading in sedimentation-velocity experiments. 5. Measurement of the diffusion coefficient of bovine albumin by Fujita's equation 503
BARLOW, J. J. Some observations on the behaviour of steroid conjugates on alumina 34P
BARNETT, A. J. G. & REID, R. L. The distribution of the volatile fatty acids formed from dried grass by the action of rumen liquor in the artificial rumen 13P
BARRON, J. R. *see* FENWICK, M. L. 58
BARTHOLOMEW, R. J., DALGLIESH, C. E. & WOOTTON, I. D. P. A combined spectrophotofluorimeter and double monochromator spectrophotometer 27P
BARTLEY, W. *see* VIGNAIS, PAULETTE 396
BELL, M. E. *see* LIVINGSTON, M. 438
BERGMANN, E. D. *see* LEVINSON, Z. H. 254
BERNSTEIN, L. & WEATHERALL, M. An electrical analogue for the analysis of multiple exponential curves 41P
BERRIDGE, N. J. *see* CHEESEMAN, G. C. 603
BILLING, B. H., COLE, P. G. & LATHE, G. H. The excretion of bilirubin as a diglucuronide giving the direct van den Bergh reaction 774
BIRKINSHAW, J. H. & HAMMADY, I. M. M. Studies in the biochemistry of micro-organisms. 99. Metabolic products of *Aspergillus versicolor* (Vuillemin) Tiraboschi 162
BLAIR, J. A. Some observations on the oxidative degradation of pteroyl-L-glutamic acid 209
BLAKLEY, R. L. The interconversion of serine and glycine: preparation and properties of catalytic derivatives of pteroylglutamic acid 331
BLAKLEY, R. L. The interconversion of serine and glycine: some further properties of the enzyme system 342
BLUMSOM, N. L. Formation of ammonia from glutamine by rat-brain particles 138
BOOIJ, H. L. & RIMINGTON, C. Effect of pre-heating on porphyrin synthesis by red cells 4P
BOOIJ, H. L. *see also* RIMINGTON, C. 3P
BOOTH, V. H. β-Carotene in the flowers of *Narcissus* 660
BOROOAH, J., LEABACK, D. H. & WALKER, P. G. Substrates for *N*-acetyl-β-glucosaminidase 15P
BOYLAND, E., MANSON, D. & ORR, S. F. D. The biochemistry of aromatic amines. 2. The conversion of arylamines into arylsulphamic acids and arylamine-*N*-glucosiduronic acids 417
BRAY, H. G., JAMES, S. P. & THORPE, W. V. The metabolism of 2:4-, 2:5- and 3:4-dichloronitrobenzene in the rabbit 483
BRESLOW, E. *see* MAPSON, L. W. 29P
BRIDGWATER, R. J. & RYAN, D. A. Sulphate conjugation with ranol and other steroid alcohols in liver homogenates from *Rana temporaria* 24P
BROOKS, R. V. & KLYNE, W. Steroids of pregnant mare's urine. 5. Identification of two androstane-3:16-diols. The structure of 'uranolone' 663
BUCHANAN, D. J., CRUMPTON, M. J. & MORGAN, W. T. J. Studies in immunochemistry. 17. The decomposition of serologically specific H substance isolated from pig gastric mucin and human ovarian cyst fluids by an enzyme preparation obtained from *Clostridium welchii* (type B) 186
BUDDLE, H. L. *see* AYRES, P. J. 9P
BYRDE, R. J. W. & WOODCOCK, D. Fungal detoxication. 2. The metabolism of some phenoxy-*n*-alkylcarboxylic acids by *Aspergillus niger* 682

CAMPBELL, C. W. *see* PRICE, C. A. 512
CAMPBELL, P. N. & HALLIDAY, J. W. The conversion of glucose into alanine and glutamic acid by rat liver, liver tumour and kidney *in vivo* 28
CAWKWELL, J. M. *see* NEEDHAM, D. M. 540
CHAPPELL, J. B. *see* PERRY, S. V. 469
CHEESEMAN, G. C. & BERRIDGE, N. J. An improved method of preparing nisin 603
CLARKE, A. J. & MANN, P. J. G. The oxidation of tryptamine to 3-indolylacetaldehyde by plant amine oxidase 763

CLOUET, D. E. & RICHTER, D. The incorporation of [^{35}S]-methionine into protein fractions of the rat brain 20P
CLUBB, M. E. *see* ARNSTEIN, H. R. V. 618
COHEN, S. S. *see* SCOTT, D. B. McNAIR 686
COLE, P. G. *see* BILLING, B. H. 774
CONCHIE, J., FINDLAY, J. & LEVVY, G. A. α-Mannosidase in mammalian tissues 18P
CONCHIE, J. & LEVVY, G. A. Inhibition of glycosidases by aldonolactones of corresponding configuration 389
CONNELL, P. H. Amphetamine in the urine of mental hospital patients 7P
COOKE, N. J. *see* HANSEN, R. P. 18
CORNFORTH, J. W., GORE, I. YOUHOTSKY & POPJÁK, G. Studies on the biosynthesis of cholesterol. 4. Degradation of rings C and D 94
CRAWFORD, L. V. Deoxyribonucleic acid synthesis in bacteriophage-infected *Escherichia coli* 17P
CRAWHALL, J. C. *see* ARNSTEIN, H. R. V. 18P
CROOK, E. M. & STONE, B. A. The enzymic hydrolysis of β-glucosides 1
CRUMPTON, M. J. *see* BUCHANAN, D. J. 186

DALGLIESH, C. E. & DUTTON, R. W. On the site of formation of 5-hydroxytryptophan 21P
DALGLIESH, C. E. *see also* BARTHOLOMEW, R. J. 27P
DAWSON, R. M. C., MANN, T. & WHITE, I. G. Glycerylphosphorylcholine and phosphorylcholine in semen, and their relation to choline 627
DIANZANI, M. U. The content of adenosine polyphosphates in fatty livers 116
DODGSON, K. S. & LLOYD, A. G. Separation of the chondroitinase and chondrosulphatase systems of *Proteus vulgaris* 4P
DODGSON, K. S., LLOYD, A. G. & SPENCER, B. Studies on sulphatases. 14. A preliminary account of the chondrosulphatase of *Proteus vulgaris* 131
DODGSON, K. S. & SPENCER, B. Studies on sulphatases. 15. The arylsulphatases of human serum and urine 668
DOHMEN, H. *see* ANSELL, G. B. 1P
DREWRY, J. *see* ASCHAFFENBURG, R. 273
DUFF, R. B., WEBLEY, D. M. & FARMER, V. C. 6-*O*-Acetylglucopyranose—a metabolite of *Bacillus megaterium* 21P
DUNCAN, W. R. H. *see* LOUGH, A. K. 31P
DUTTON, R. W. *see* DALGLIESH, C. E. 21P

EASTOE, J. E. The amino acid composition of fish collagen and gelatin 363
EDWARDS, C. M. *see* EVANS, W. C. 6P
EGGLESTON, L. V. The effects of phosphates, arsenates and nucleotides on L-amino acid decarboxylases 735
EKLADIUS, L. & KING, H. K. A colorimetric method for the determination of aliphatic amines in the presence of ammonia 128
EL MASRY, A. M., SMITH, J. N. & WILLIAMS, R. T. The metabolism of phenylethylene and phenylacetylene 19P
ELLIOTT, D. F. & PEART, W. S. The amino acid sequence in a hypertensin 246
ELLIOTT, W. H. The breakdown of adenosine triphosphate accompanying cholic acid activation by guinea-pig liver microsomes 315
ENNOR, A. H. *see* GRIFFITHS, D. E. 153, 612; MORRISON, J. F. 143
§ERNSTER, L. Distribution and interaction of enzymes within animal cells 44P
EVANS, I. A. *see* EVANS, W. C. 6P; THOMAS, A. J. 5P
EVANS, J. V., HARRIS, H. & WARREN, F. L. Haemoglobin types in British breeds of sheep 42P
EVANS, W. C., EVANS, I. A., EDWARDS, C. M. & THOMAS, A. J. Bracken poisoning of cattle—therapeutic treatment 6P
EVANS, W. C. & MOSS, P. The metabolism of the herbicide *p*-chlorophenoxyacetic acid by a soil micro-organism—the formation of a β-chloromuconic acid on ring fission 8P
EVANS, W. C. *see also* THOMAS, A. J. 5P

FARMER, V. C. *see* DUFF, R. B. 21P
FAZAKERLEY, S. & GLOVER, J. The provitamin A activity of some possible intermediates in β-carotene metabolism 38P
FEINBERG, J. G. Specific absorption with line extinction in Ouchterlony plates 40P
FEINBERG, J. G. & GRANT, R. A. Ouchterlony gel plate precipitates with a simple chemical substance: dihydroxydi-(*p*-azophenylarsonic acid)-benzene 40P
FENWICK, M. L., BARRON, J. R. & WATSON, W. A. The conversion of dimefox into an anticholinesterase by rat liver *in vitro* 58
FESTENSTEIN, G. N. Differentiation of cellobiase and 'carboxymethylcellulase' by glucono-1:4-lactone 23P
FEWSTER, J. A. Oxidation by ultrasonic extracts of *Acetobacter suboxydans* 14P
FINCHAM, J. R. S. A modified glutamic acid dehydrogenase as a result of gene mutation in *Neurospora crassa* 721
FINDLAY, J. *see* CONCHIE, J. 18P
FOLKES, J. P. *see* ROWLANDS, D. A. 519
FORSYTH, W. G. C. & QUESNEL, V. C. Cacao polyphenolic substances. 4. The anthocyanin pigments 177
FRANCIS, G. E. & HAWKINS, J. D. The use of radioactive isotopes in immunological investigations. 11. The fate of some chemically modified protein antigens in normal and immune rabbits 570
FRANCIS, G. E., HAWKINS, J. D. & WORMALL, A. The use of radioactive isotopes in immunological investigations. 10. The fate of some intravenously injected native proteins in normal and immune rabbits 560
FUTTER, J. H. & SHORLAND, F. B. Studies on the composition of lipids of the rabbit 689

GALE, E. F. *see* ROWLANDS, D. A. 519
GARROD, O. *see* AYRES, P. J. 639
GARTON, G. A. *see* LOUGH, A. K. 31P
GEORGE, P. & HANANIA, G. I. H. The ionization of acidic metmyoglobin. Ionic-strength charge effects 756
GERSON, T. *see* LIVINGSTON, M. 438
GLOCK, G. E. & MCLEAN, P. Levels of oxidized and reduced diphosphopyridine nucleotide and triphosphopyridine nucleotide in tumours 413
GLOVER, J. *see* FAZAKERLEY, S. 38P
GORE, I. YOUHOTSKY *see* CORNFORTH, J. W. 94
GRANT, R. A. *see* FEINBERG, J. G. 40P
GRAY, C. H. *see* ADCOCK, L. H. 554, 4P
GREEN, B., HORNER, A. A., LOWE, J. S. & MORTON, R. A. Cholesterol and liver vitamin A in male and female rats 33P
GRIFFITHS, D. E., MORRISON, J. F. & ENNOR, A. H. A study of the kinetics of the reactions catalysed by arginine phosphokinase 153
GRIFFITHS, D. E., MORRISON, J. F. & ENNOR, A. H. The distribution of guanidines, phosphagens and *N*-amidino phosphokinases in echinoids 612
GRIFFITHS, D. E. *see also* MORRISON, J. F. 143
GROSSOWICZ, N. *see* HALPERN, Y. S. 716

HALLIDAY, J. W. *see* CAMPBELL, P. N. 28
HALPERN, Y. S. & GROSSOWICZ, N. Hydrolysis of amides by extracts from mycobacteria 716
HAMMADY, I. M. M. *see* BIRKINSHAW, J. H. 162
HANANIA, G. I. H. *see* GEORGE, P. 756
HANSEN, R. P., SHORLAND, F. B. & COOKE, N. J. The occurrence of *n*-heptadecanoic acid (margaric acid) in unhydrogenated mutton fat 18

HANSEN, R. P. *see also* LIVINGSTON, M. 438
HARBORNE, J. B. & SHERRATT, H. S. A. The identification of the sugars of anthocyanins 23P
HARBORNE, J. B. & SHERRATT, H. S. A. The specificity of fungal anthocyanase 24P
HARRIS, H. *see* EVANS, J. V. 42P
HARRIS, P. M. *see* ROBINSON, D. S. 38P
HATHWAY, D. E. & SEAKINS, J. W. T. Polyphenoloxidase oxidation of catechin, and an initial comparison of the polymer obtained with two tannins 32P
HAUGHTON, B. G. & KING, H. K. Inhibition of B_6-enzymes by toxopyrimidine phosphate (4-amino-5-hydroxymethyl-2-methylpyrimidine *O*-phosphate) 36P
HAWKINS, J. D. *see* FRANCIS, G. E. 560, 570
HAY, A. J. *see* LEVVY, G. A. 203
HEALD, P. J. Phosphates from cerebral tissue which increase in radioactivity in the presence of $^{32}PO_4$ during the passage of electrical pulses 3P
HEALD, P. J. *see also* AYRES, P. J. 9P
HEATH, H., RIMINGTON, C. & MANN, T. Further studies on seminal ergothioneine of the pig 369
HEATH, H. *see also* WILDY, J. 220
HECHTER, O. *see* AYRES, P. J. 22P
HELE, P., POPJÁK, G. & LAURYSSENS, M. Biosynthesis of fatty acids in cell-free preparations. 4. Synthesis of fatty acids from acetate by a partially purified enzyme system from rabbit mammary gland 348
HOARE, D. S. & WORK, E. The stereoisomers of αε-diaminopimelic acid. 2. Their distribution in the bacterial order Actinomycetales and in certain Eubacteriales 441
HOARE, D. S. *see also* ANTIA, M. 448
HOBSON, G. E. & REES, K. R. The annelid phosphokinases 305
HODGKIN, D. CROWFOOT & OUGHTON, B. M. Possible molecular models for gramicidin S and their relationship to present ideas of protein structure. *Appendix 2 to*: A crystallographic study of some derivatives of gramicidin S (Schmidt, G. M. J., Hodgkin, D. Crowfoot & Oughton, B. M.) 752
HODGKIN, D. CROWFOOT *see also* SCHMIDT, G. M. J. 744
HOLT, P. F. & WENT, C. W. The interaction of insulin monolayers with polysilicic acid 13P
§HOLT, S. J. Principles and potentialities of cytochemical staining methods for the study of intracellular enzyme distributions 43P
HORNER, A. A. *see* GREEN, B. 33P
HOWARD, A. N. & WILD, F. The reactions of diazonium compounds with amino acids and proteins 651
HUMPHREY, G. F. The distribution and properties of transhydrogenase from animal tissues 546

INGRAM, V. M. The sulphydryl groups of sickle-cell haemoglobin 760

JACKSON, D. S. Connective tissue growth stimulated by carrageenin. 1. The formation and removal of collagen 277
JAMES, A. M. *see* LOWICK, J. H. B. 431
JAMES, A. T. *see* WHEATLEY, V. R. 36
JAMES, S. P. *see* BRAY, H. G. 483
JENKINS, W. J. *see* KEYSER, J. W. 37P
JONDORF, W. R., PARKE, D. V. & WILLIAMS, R. T. The metabolism of [^{14}C]hexachloroethane 14P
JONGE, M. H. T. DE *see* MYERS, D. K. 223, 232
JOYCE, C. R. B. & WEATHERALL, M. Potassium and sodium movements in sheep blood cells 6P
JUDAH, J. D. & REES, K. R. Changes in cellular components in liver injury 45P

KEMP, A. JUN. *see* MYERS, D. K. 232
KENT, P. W. *see* LOEWI, G. 550
KENTEN, R. H. & MANN, P. J. G. Manganese oxidation in the pea plant (*Pisum sativum* L.) grown under conditions of manganese toxicity 179
KERMACK, W. O. & MATHESON, N. A. The effects of some analogues of glutathione on the glyoxalase system 48
KERMACK, W. O. & MATHESON, N. A. The synthesis of some analogues of glutathione 45
KEYSER, J. W., JENKINS, W. J., LLOYD, G. H. T., PALLIS, C. & SANDERS, P. G. Serum proteins and protein-bound carbohydrate in relation to tissue breakdown and regeneration 37P
KING, H. K. *see* EKLADIUS, L. 128; HAUGHTON, B. G. 36P; SHAH, P. C. 36P
KITS VAN HEIJNINGEN, A. J. M. The influence of insulin on free and fixed glycogen in the diaphragm of the rat 111
KLEBANOFF, S. J. Glutathione metabolism. 2. The oxidation and reduction of glutathione in intact erythrocytes 423
KLYNE, W. *see* BROOKS, R. V. 663
KOGUT, M. Isolation and purification of a soluble cytochrome from a fluorescent pseudomonad 35P
KOHN, J. A new supporting medium for zone electrophoresis 9P

LATHE, G. H. *see* BILLING, B. H. 774
LAURENCE, D. J. R. A stable single beam fluorimeter covering excitation wavelengths less than 365 mμ 27P
LAURYSSENS, M. *see* HELE, P. 348
LEA, C. H. *see* RHODES, D. N. 526
LEABACK, D. H. *see* BOROOAH, J. 15P; PUGH, D. 464, 16P
LEAF, A. & RENSHAW, A. Ion transport and respiration of isolated frog skin 82
LEAF, A. & RENSHAW, A. The anaerobic active ion transport by isolated frog skin 90
LEES, H. & SIMPSON, J. R. The biochemistry of the nitrifying organisms. 5. Nitrite oxidation by *Nitrobacter* 297
LEONARD, R. A. *see* ROWSELL, E. V. 26P
LEVINSON, Z. H. & BERGMANN, E. D. Steroid utilization and fatty acid synthesis by the larva of the housefly *Musca vicina* Macq. 254
LEVVY, G. A., HAY, A. J. & MARSH, C. A. Properties of limpet β-glucuronidase 203
LEVVY, G. A. *see also* CONCHIE, J. 389, 18P
LEWIN, S. Some aspects of the effect of the initial pH on the behaviour of glucose in the amino acid–glucose interactions 30P
LEWIN, S. & MCCALL, J. S. Some aspects of the interaction of glycylglycine with glucose 30P
LIVINGSTON, M., BELL, M. E., SHORLAND, F. B., GERSON, T. & HANSEN, R. P. The metabolism in the rat of naturally occurring (+)-14-methylhexadecanoic acid 438
LLOYD, A. G. *see* DODGSON, K. S. 131, 4P
LLOYD, G. H. T. *see* KEYSER, J. W. 37P
LOEWI, G. & KENT, P. W. The utilization of inorganic sulphate by granulation tissue 550
LONG, C. & PENNY, I. F. The structure of the naturally occurring phosphoglycerides. 3. Action of moccasin-venom phospholipase *A* on ovolecithin and related substances 382
LONGMUIR, I. S. Respiration rate of rat-liver cells at low oxygen concentrations 378
LOUGH, A. K., GARTON, G. A. & DUNCAN, W. R. H. The fatty acid composition of the sterol esters and triglycerides in the plasma of lactating cows 31P
LOUGHMAN, B. C. *see* PEEL, J. L. 709
LOWE, J. S. *see* GREEN, B. 33P
LOWENSTEIN, J. M. A non-enzymic transphosphorylation catalysed by manganous ions 40P
LOWENSTEIN, J. M. The preparation of ^{32}P-labelled adenosine polyphosphates 197

LOWICK, J. H. B. & JAMES, A. M. The electrokinetic properties of *Aerobacter aerogenes*. A comparison of the properties of normal and crystal violet-trained cells 431

MCCALL, J. S. *see* LEWIN, S. 30P
*MCCOUBREY, A. Estimation of primary arylalkylamines by salicylaldehyde 11P
MCILWAIN, H., MARTIN, H. & TRESIZE, M. A. Glutathione and glutathione reductase in cerebral tissues 2P
MCILWAIN, H. & TRESIZE, M. A. The speed of several cerebral reactions involving the nicotinamide coenzymes 288
MCILWAIN, H. *see also* AYRES, P. J. 9P
MCISAAC, W. M., PARKE, D. V. & WILLIAMS, R. T. The fate of [^{14}C]phenylhydrazine in the rabbit 15P
MACKAY, M. E. & MARTIN, N. H. The stabilization of purified human albumin to heat 284
MCLEAN, P. *see* GLOCK, G. E. 413
MAGEE, P. N. Toxic liver injury. Inhibition of uptake of labelled amino acids into liver protein *in vivo* by dimethylnitrosamine 31P
MANDEL, H. G. & MARKHAM, R. The replacement of guanine by 8-azaguanine during nucleic acid biosynthesis in *Bacillus cereus* 25P
MANN, P. J. G. *see* CLARKE, A. J. 763; KENTEN, R. H. 179
MANN, T. & WHITE, I. G. Glycerol metabolism by spermatozoa 634
MANN, T. *see also* DAWSON, R. M. C. 627; HEATH, H. 369
MANSON, D. *see* BOYLAND, E. 417
MAPSON, L. W. & BRESLOW, E. Properties of partially purified L-galactono-γ-lactone dehydrogenase 29P
MARKHAM, R. *see* MANDEL, H. G. 25P
MARPLES, E. A. *see* WEBSTER, G. R. 374
MARRIAN, D. H. *see* ROWLANDS, D. A. 519
MARRIAN, G. F., WATSON, E. J. D. & PANATTONI, M. The isolation of a ketonic dihydroxy Kober chromogen from the urine of pregnant women 12
MARSH, C. A. *see* LEVVY, G. A. 203
MARTIN, E. M. & MORTON, R. K. Haem pigments of cytoplasmic particles from non-photosynthetic plant tissues 404
MARTIN, H. *see* MCILWAIN, H. 2P
MARTIN, N. H. *see* MACKAY, M. E. 284
MATHESON, N. A. *see* KERMACK, W. O. 45, 48
§MITCHELL, P. Structure and function in micro-organisms 44P
MORGAN, D. M. *see* WADE, H. E. 321
MORGAN, W. T. J. *see* BUCHANAN, D. J. 186
MORRISON, J. F., GRIFFITHS, D. E. & ENNOR, A. H. The purification and properties of arginine phosphokinase 143
MORRISON, J. F. *see also* GRIFFITHS, D. E. 153, 612
MORTON, R. A. *see* GREEN, B. 33P
MORTON, R. K. The kinetics of hydrolysis of phenyl phosphate by alkaline phosphatases 674
MORTON, R. K. *see also* MARTIN, E. M. 404
MOSS, P. *see* EVANS, W. C. 8P
MUIR, H. A new amino sugar in acid hydrolysates of chondroitin sulphate from hyaline cartilage 33P
MYERS, D. K., KEMP, A. JUN., TOL, J. W. & JONGE, M. H. T. DE. Studies on ali-esterases. 6. Selective inhibitors of the esterases of brain and saprophytic mycobacteria 232
MYERS, D. K., TOL, J. W. & JONGE, M. H. T. DE. Studies on ali-esterases. 5. Substrate specificity of the esterases of some saprophytic mycobacteria 223

NAIDOO, D. & PRATT, O. E. A simplified cryostatic drier for histopathological study of brain enzymes 10P
NAIDOO, D. & PRATT, O. E. The localization of hydrolytic enzymes in normal and pathological brain tissue 10P
NEEDHAM, D. M. & CAWKWELL, J. M. The protein composition and nucleic acid content of the rat uterus in different states 540
NEIL, M. W. Perfusion of the lumen of rat small intestine 41P
NEIL, M. W., WALKER, D. G. & WARREN, F. L. Fructose formation in goat placenta 35P
NEILL, K. G. & RAISTRICK, H. Studies in the biochemistry of micro-organisms. 100. Metabolites of *Penicillium atrovenetum* G. Smith. Part 1. Atrovenetin, a new crystalline colouring matter 166

ORR, S. F. D. *see* BOYLAND, E. 417
OTT, J. L. & WERKMAN, C. H. Enzymic transfer of the ribosyl group from inosine to adenine 609
OUGHTON, B. M. *see* HODGKIN, D. CROWFOOT 752; SCHMIDT, G. M. J. 744

PALLIS, C. *see* KEYSER, J. W. 37P
PANATTONI, M. *see* MARRIAN, G. F. 12
PARKE, D. V. *see* JONDORF, W. R. 14P; MCISAAC, W. M. 15P
PARR, C. W. Competitive inhibitors of phosphoglucose isomerase 34P
PATTERSON, D. S. P. Qualitative and quantitative changes observed in the free α-amino nitrogen fraction of *Tenebrio molitor* pupal tissues during metamorphosis 729
PEARLMAN, W. H. A comparative study of [16-^{3}H]-progesterone metabolism in pregnant and non-pregnant women 7P
PEART, W. S. *see* ELLIOTT, D. F. 246
PEEL, J. L. & LOUGHMAN, B. C. Some observations on the role of copper ions in the reduction of phosphomolybdate by ascorbic acid and their application in the determination of inorganic orthophosphate 709
PELLEGRINO, C. & VILLANI, G. β-Glucuronidase activity in lymphatic tissues of the rat after X-ray irradiation of the whole body 599
PENNINGTON, R. J. Some effects of propionate upon acetate metabolism in animal tissue slices 534
PENNINGTON, R. J. & PFANDER, W. H. The metabolism of short-chain fatty acids in the sheep. 5. Some interrelationships in the metabolism of fatty acids and glucose by sheep-rumen epithelial tissue 109
PENNY, I. F. *see* LONG, C. 382
PERRY, S. V. & CHAPPELL, J. B. The action of 2:4-dinitrophenol on myosin and mitochondrial adenosine triphosphatase systems 469
PFANDER, W. H. *see* PENNINGTON, R. J. 109
PIERPOINT, W. S. The phosphatase and metaphosphatase activities of pea extracts 67
POOLE, J. C. F. *see* ROBINSON, D. S. 38P
POPJÁK, G. *see* CORNFORTH, J. W. 94; HELE, P. 348
POWELL, J. F. & STRANGE, R. E. $\alpha\epsilon$-Diaminopimelic acid metabolism and sporulation in *Bacillus sphaericus* 700
PRATT, O. E. *see* NAIDOO, D. 10P
PRICE, C. A. & CAMPBELL, C. W. A chromatographic method of analysis for thiols 512
PUGH, D., LEABACK, D. H. & WALKER, P. G. *N*-Acetyl-β-glucosaminidase in rat tissue preparations 16P
PUGH, D., LEABACK, D. H. & WALKER, P. G. Studies on glucosaminidase. *N*-Acetyl-β-glucosaminidase in rat kidney 464

QUESNEL, V. C. *see* FORSYTH, W. G. C. 177

RAISTRICK, H. *see* NEILL, K. G. 166
RAJAGOPAL, M. V. & SOHONIE, K. Studies on the sea anemone *Gyrostoma* sp. Lipids of *Gyrostoma* sp. 34
RAMACHANDRAN, K. & WALKER, T. K. Glucose metabolism in *Candida* species 20
REES, K. R. *see* HOBSON, G. E. 305; JUDAH, J. D. 45P§
REID, R. L. *see* BARNETT, A. J. G. 13P
RENSHAW, A. *see* LEAF, A. 82, 90

RHODES, D. N. & LEA, C. H. Phospholipids. 4. On the composition of hen's egg phospholipids 526
RICHTER, D. *see* CLOUET, D. E. 20P
RIMINGTON, C. & BOOIJ, H. L. Porphyrin biosynthesis in human red cells 3P
RIMINGTON, C. *see also* BOOIJ, H. L. 4P; HEATH, H. 369
§ROBERTSON, J. D. The ultrastructure of cell membranes and their derivatives 43P
ROBINSON, D. S., HARRIS, P. M. & POOLE, J. C. F. The effect on the clotting time of rat plasma of a phosphatidase from *Bacillus cereus* 38P
RODNIGHT, R. *see* AYRES, P. J. 9P
ROTHBUHR, L. & SCOTT, F. A study of the uptake of silicon and phosphorus by wheat plants, with radiochemical methods 241
ROWLANDS, D. A., GALE, E. F., FOLKES, J. P. & MARRIAN, D. H. The assimilation of amino acids by bacteria. 23. Accumulation of free glutamic acid within *Staphylococcus aureus* incubated with derivatives of glutamic acid 519
ROWLANDS, D. A. & YOUNG, G. T. The synthesis of some peptides containing glutamic acid 516
ROWSELL, E. V. & LEONARD, R. A. The effect of soluble silica on the respiration of rat liver homogenates 26P
RYAN, D. A. *see* BRIDGWATER, R. J. 24P

SABA, N. *see* AYRES, P. J. 22P
SANDERS, P. G. *see* KEYSER, J. W. 37P
SARMA, P. S. *see* SUNDARARAJAN, T. A. 261
SCHMIDT, G. M. J., HODGKIN, D. CROWFOOT & OUGHTON, B. M. A crystallographic study of some derivatives of gramicidin S 744
SCOTT, D. B. MCNAIR & COHEN, S. S. The oxidative pathway of carbohydrate metabolism in *Escherichia coli*. 5. Isolation and identification of ribulose phosphate produced from 6-phosphogluconate by the dehydrogenase of *E. coli* 686
SCOTT, F. *see* ROTHBUHR, L. 241
SEAKINS, J. W. T. *see* HATHWAY, D. E. 32P
SHAH, P. C. & KING, H. K. Configuration of amino acids formed by reductive amination in *Bacillus subtilis* 36P
SHERRATT, H. S. A. *see* HARBORNE, J. B. 23P, 24P
SHORLAND, F. B. *see* FUTTER, J. H. 689; HANSEN, R. P. 18; LIVINGSTON, M. 438
SIMKIN, J. L. & WHITE, K. The formation of hippuric acid. The influence of benzoate administration on tissue glycine levels 574
SIMKIN, J. L. & WORK, T. S. Protein synthesis in guinea-pig liver. Incorporation of radioactive amino acids into proteins of the microsome fraction *in vivo* 307
SIMPSON, J. R. *see* LEES, H. 297
SIMPSON, S. A. *see* AYRES, P. J. 639, 647, 22P
SLACK, H. G. B. Connective tissue growth stimulated by carrageenin. 2. The metabolism of sulphated polysaccharides 459
SLOANE-STANLEY, G. H. The estimation of ascorbic acid and its oxidized forms in brain and cerebrospinal fluid 11P
SMITH, J. N. Ornithuric acid formation in reptiles 19P
SMITH, J. N. *see also* EL MASRY, A. M. 19P
SNOW, G. A. The metabolism of compounds related to ethanethiol 77
SOHONIE, K. *see* RAJAGOPAL, M. V. 34
SPENCER, B. *see* DODGSON, K. S. 131, 668
STANWORTH, D. R. The isolation and identification of horse-dandruff allergen 582
STONE, B. A. *see* CROOK, E. M. 1
STRANGE, R. E. *see* POWELL, J. F. 700
SUNDARARAJAN, T. A. & SARMA, P. S. Preparation and amino acid composition of enzymically dephosphorylated casein 261
SWALLOW, D. L. & ABRAHAM, E. P. A cyclic derivative of aspartyllysine obtained from bacitracin A 39P
SYNGE, R. L. M. Experiments on electrical migration of peptides and proteins inside porous membranes: influences of adsorption, diffusion and pore dimensions 266
SYNGE, R. L. M. Preparation of some derivatives of gramicidin S. *Appendix 1 to*: A crystallographic study of some derivatives of gramicidin S (Schmidt, G. M. J., Hodgkin, D. Crowfoot & Oughton, B. M.) 750

TAIT, J. F. *see* AYRES, P. J. 639, 647, 22P
TEALE, F. W. J. & WEBER, G. Ultraviolet fluorescence of the aromatic amino acids 476
THOMAS, A. J., EVANS, I. A. & EVANS, W. C. Bracken poisoning of cattle—nature of the poison 5P
THOMAS, A. J. *see also* EVANS, W. C. 6P
THOMAS, J. *In vitro* resynthesis of energy-rich phosphates in cerebral tissue 8P
THOMPSON, R. H. S. *see* WEBSTER, G. R. 374
THORPE, W. V. *see* BRAY, H. G. 483
THRELFALL, C. J. An analytical procedure for the acid-soluble phosphorus compounds in rat-skeletal muscle 694
TOL, J. W. *see* MYERS, D. K. 223, 232
TRESIZE, M. A. *see* MCILWAIN, H. 288, 2P

VAN HEYNINGEN, R. *meso*Inositol in the lens of mammalian eyes 24
VANDEKAR, M. The effect of the persistence of the inhibitor on the rate of the return of cholinesterase activity *in vivo* after injection with different dimethyl phosphate esters 1P
VIGNAIS, P. *see* VIGNAIS, PAULETTE 396
VIGNAIS, PAULETTE, VIGNAIS, P. & BARTLEY, W. Oxidation of *iso*citrate and associated phosphorylations 396
VILLANI, G. *see* PELLEGRINO, C. 599

WADE, H. E. & MORGAN, D. M. The nature of the fluctuating ribonucleic acid in *Escherichia coli* 321
WALKER, D. G. *see* NEIL, M. W. 35P
WALKER, P. G. *see* BOROOAH, J. 15P; PUGH, D. 464, 16P
WALKER, T. K. *see* RAMACHANDRAN, K. 20
WARREN, F. L. *see* EVANS, J. V. 42P; NEIL, M. W. 35P
WATSON, E. J. D. *see* MARRIAN, G. F. 12
WATSON, W. A. *see* FENWICK, M. L. 58
WEATHERALL, M. *see* BERNSTEIN, L. 41P; JOYCE, C. R. B. 6P
WEBER, G. *see* TEALE, F. W. J. 476
WEBLEY, D. M. *see* DUFF, R. B. 21P
WEBSTER, G. R., MARPLES, E. A. & THOMPSON, R. H. S. Glycerylphosphorylcholine diesterase activity of nervous tissue 374
WENT, C. W. *see* HOLT, P. F. 13P
WERKMAN, C. H. *see* OTT, J. L. 609
WHEATLEY, V. R. & JAMES, A. T. Studies of sebum. 7. The composition of the sebum of some common rodents 36
WHITE, I. G. *see* DAWSON, R. M. C. 627; MANN, T. 634
WHITE, K. *see* SIMKIN, J. L. 574
WILD, F. *see* HOWARD, A. N. 651
WILDY, J. & HEATH, H. Biosynthesis of ergothioneine by *Claviceps purpurea*. 2. Incorporation of [^{35}S]methionine and the non-utilization of [2(ring)-^{14}C]histamine 220
WILLIAMS, R. T. The Aminco–Bowman Spectrophotofluorometer 26P
WILLIAMS, R. T. *see also* EL MASRY, A. M. 19P; JONDORF, W. R. 14P; MCISAAC, W. M. 15P
WITTENBERG, J. B. The separation of the C_6–C_{12} fatty acids by reversed-phase partition chromatography 42
WOODCOCK, D. *see* BYRDE, R. J. W. 682
WOOTTON, I. D. P. *see* BARTHOLOMEW, R. J. 27P
WORK, E. *see* ANTIA, M. 448; HOARE, D. S. 441
WORK, T. S. *see* SIMKIN, J. L. 307
WORMALL, A. *see* FRANCIS, G. E. 560

YOUNG, G. T. *see* ROWLANDS, D. A. 516

Index of Subjects

Note. Entries marked with an asterisk (*) refer to communications made in title only.
Entries marked with a section mark (§) refer to contributions to Symposia.
Pages in *Proceedings of the Biochemical Society* are distinguished by P.

Acetate metabolism in animal tissue slices, effects of propionate upon (Pennington, R. J.) 534
Acetate, synthesis of fatty acids from, by an enzyme system from mammary gland (Hele, P., Popják, G. & Lauryssens, M.) 348
Acetobacter suboxydans, oxidation by ultrasonic extracts of (Fewster, J. A.) 14P
6-*O*-Acetylglucopyranose, a metabolite of *Bacillus megaterium* (Duff, R. B., Webley, D. M. & Farmer, V. C.) 21P
N-Acetyl-β-glucosaminidase, competitive inhibition of, by acetate, acetamide and *N*-acetylglucosamine (Pugh, D., Leaback, D. H. & Walker, P. G.) 464
N-Acetyl-β-glucosaminidase in rat tissue preparations (Pugh, D., Leaback, D. H. & Walker, P. G.) 16P
N-Acetyl-β-glucosaminidase, substrates for (Borooah, J., Leaback, D. H. & Weber, P. G.) 15P
Acetyltryptophan, effect of, on heat stability of albumin (Mackay, M. E. & Martin, N. H.) 284
Acids, amino *see* Amino acids
Acids, fatty *see* Fatty acids
Actinomycetales, distribution of isomers of αε-diaminopimelic acid in (Hoare, D. S. & Work, E.) 441
Adenine, enzymic transfer of ribosyl group from inosine to, by *Escherichia coli* (Ott, J. L. & Werkman, C. H.) 609
Adenosine polyphosphates, content of, in normal and fatty liver of rat (Dianzani, M. U.) 116
Adenosine triphosphatase systems, myosin and mitochondrial, action of 2:4-dinitrophenol on (Perry, S. V. & Chappell, J. B.) 469
Adenosine triphosphate, breakdown of, accompanying activation of cholic acid by liver microsomes (Elliott, W. H.) 315
Adenosine triphosphate, incorporation of ^{32}P into (Vignais, Paulette, Vignais, P. & Bartley, W.) 396
Adrenal gland, ox, intermediates in biosynthesis of aldosterone by capsule strippings of (Ayres, P. J., Hechter, O., Saba, N., Simpson, S. A. & Tait, J. F.) 22P
Aerobacter aerogenes, electrokinetic properties of (Lowick, J. H. B. & James, A. M.) 431
Alanine, formation of, from glucose by rat liver, liver tumour and kidney *in vivo* (Campbell, P. N. & Halliday, J. W.) 28
Albumin, bovine, application of measurement of standard deviation of sedimentation-coefficient distribution to (Baldwin, R. L.) 490
Albumin, bovine, measurement of diffusion coefficient of, by Fujita's equation (Baldwin, R. L.) 503
Albumin, purified human, stabilization of, to heat (Mackay, M. E. & Martin, N. H.) 284
Aldonolactones, inhibition of glycosidases by (Conchie, J. & Levvy, G. A.) 389
Aldosterone, intermediates in biosynthesis of, by capsule strippings of ox adrenal gland (Ayres, P. J., Hechter, O., Saba, N., Simpson, S. A. & Tait, J. F.) 22P
Aldosterone, urinary excretion of, in normal and pathological conditions (Ayres, P. J., Garrod, O., Simpson, S. A. & Tait, J. F.) 639
Allergen, horse-dandruff, isolation and identification of (Stanworth, D. R.) 582
Amides, hydrolysis of, by extracts from mycobacteria (Halpern, Y. S. & Grossowicz, N.) 716
N-Amidino phosphokinases, distribution of, in echinoids (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 612
Amine oxidase, plant, oxidation of tryptamine to 3-indolylacetaldehyde by (Clarke, A. J. & Mann, P. J. G.) 763
Amines, aliphatic, determination of (Ekladius, L. & King, H. K.) 128
Amino acid composition of enzymically dephosphorylated casein (Sundararajan, T. A. & Sarma, P. S.) 261
L-Amino acid decarboxylases, effects of phosphates, arsenates and nucleotides on (Eggleston, L. V.) 735
Amino acid–glucose interactions, effect of initial pH on behaviour of glucose in (Lewin, S.) 30P
Amino acid sequence in a hypertensin (Elliott, D. F. & Peart, W. S.) 246
Amino acids, aromatic, ultraviolet fluorescence of (Teale, F. W. J. & Weber, G.) 476
Amino acids, distribution of, in fish collagen and gelatin (Eastoe, J. E.) 363
Amino acids formed by reductive amination in *Bacillus subtilis*, configuration of (Shah, P. C. & King, H. K.) 36P
Amino acids, incorporation of, into proteins of liver microsomes (Simkin, J. L. & Work, T. S.) 307
Amino acids, reaction of diazonium compounds with (Howard, A. N. & Wild, F.) 651
4-Amino-5-hydroxymethyl-2-methylpyrimidine *O*-phosphate *see* Toxopyrimidine phosphate
α-Amino nitrogen, free, of *Tenebrio molitor* pupal tissues, changes in, during metamorphosis (Patterson, D. S. P.) 729
Aminopeptidase, action of, on hypertensin (Elliott, D. F. & Peart, W. S.) 246
Ammonia formation from glutamine by rat-brain particles (Blumsom, N. L.) 138
Amphetamine in urine of mental hospital patients (Connell, P. H.) 7P
Androstane-3:16-diols in pregnant mare's urine, identification of (Brooks, R. V. & Klyne, W.) 663
Annelid phosphokinases (Hobson, G. E. & Rees, K. R.) 305
Anthocyanase, fungal, specificity of (Harborne, J. B. & Sherratt, H. S. A.) 24P
Anthocyanin pigments of cacao bean (Forsyth, W. G. C. & Quesnel, V. C.) 177
Anthocyanins, identification of sugars of (Harborne, J. B. & Sherratt, H. S. A.) 23P
Antibody, reaction of, with injected antigen (Francis, G. E., Hawkins, J. D. & Wormall, A.) 560
Anticholinesterase, formation of, from dimefox by rat liver *in vitro* (Fenwick, M. L., Barron, J. R. & Watson, W. A.) 58
Antigens, fate of, after injection (Francis, G. E., Hawkins, J. D. & Wormall, A.) 560
Antigens, proteins modified as, fate of, on injection (Francis, G. E. & Hawkins, J. D.) 570
3-α-L-Arabinosidyl cyanidin from cacao bean (Forsyth, W. G. C. & Quesnel, V. C.) 177
Arginine, chromatography of, in extracts of echinoids (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 612
Arginine phosphokinase, kinetics of reactions catalysed by (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 153
Arginine phosphokinase, purification and properties of (Morrison, J. F., Griffiths, D. E. & Ennor, A. H.) 143
Arsenates, effect of, on L-amino acid decarboxylases (Eggleston, L. V.) 735

*Arylalkylamines, primary, estimation of, by salicylaldehyde (McCoubrey, A.) 11P
Arylamines, conversion of, into arylsulphamic acids and arylamine-*N*-glucosiduronic acids (Boyland, E., Manson, D. & Orr, S. F. D.) 417
Arylsulphamic acids, conversion of arylamines into (Boyland, E., Manson, D. & Orr, S. F. D.) 417
Arylsulphatases of human serum and urine (Dodgson, K. S. & Spencer, B.) 668
Ascorbic acid and its oxidized forms in brain and cerebrospinal fluid, estimation of (Sloane-Stanley, G. H.) 11P
Ascorbic acid, role of copper ions in reduction of phosphomolybdate by (Peel, J. L. & Loughman, B. C.) 709
Aspartyllysine, cyclic derivative of, obtained from bacitracin A (Swallow, D. L. & Abraham, E. P.) 39P
Aspergillus niger, metabolism of phenoxy-*n*-alkylcarboxylic acids by (Byrde, R. J. W. & Woodcock, D.) 682
Aspergillus versicolor, metabolic products of (Birkinshaw, J. H. & Hammady, I. M. M.) 162
Atrovenetin, production of, by *Penicillium atrovenetum* and identity of, with deoxynorherqueinone (Neill, K. G. & Raistrick, H.) 166
8-Azaguanine, replacement of guanine by, during nucleic acid biosynthesis in *Bacillus cereus* (Mandel, H. G. & Markham, R.) 25P

Bacillus cereus, effect of a phosphatidase from, on clotting time of rat plasma (Robinson, D. S., Harris, P. M. & Poole, J. C. F.) 38P
Bacillus cereus, replacement of guanine by 8-azaguanine during nucleic acid biosynthesis in (Mandel, H. G. & Markham, R.) 25P
Bacillus megaterium, 6-*O*-acetylglucopyranose a metabolite of (Duff, R. B., Webley, D. M. & Farmer, V. C.) 21P
Bacillus sphaericus, sporulating, $\alpha\varepsilon$-diaminopimelic acid metabolism in (Powell, J. F. & Strange, R. E.) 700
Bacillus subtilis, configuration of amino acids formed by reductive amination in (Shah, P. C. & King, H. K.) 36P
Bacitracin A, cyclic derivative of aspartyllysine obtained from (Swallow, D. L. & Abraham, E. P.) 39P
Bacteria, 12 species of, nature of fluctuating ribonucleic acid in (Wade, H. E. & Morgan, D. M.) 321
Benzoate administration, influence of, on tissue glycine levels (Simkin, J. L. & White, K.) 574
Bile, excretion of bilirubin as ester diglucuronide in (Billing, B. H., Cole, P. G. & Lathe, G. H.) 774
Bilirubin, excretion of, as a diglucuronide giving direct van den Bergh reaction (Billing, B. H., Cole, P. G. & Lathe, G. H.) 774
Bracken poisoning of cattle, nature of the poison in (Thomas, A. J., Evans, I. A. & Evans, W. C.) 5P
Bracken poisoning of cattle, therapeutic treatment for (Evans, W. C., Evans, I. A., Edwards, C. M. & Thomas, A. J.) 6P
Brain enzymes, simplified cryostatic drier for histopathological study of (Naidoo, D. & Pratt, O. E.) 10P
Brain, estimation of ascorbic acid and its oxidized forms in (Sloane-Stanley, G. H.) 11P
Brain phospholipids, turnover of, during anaesthesia, chlorpromazine sedation and convulsions (Ansell, G. B. & Dohmen, H.) 1P
Brain, rat, incorporation of [^{35}S]methionine into protein fractions of (Clouet, D. E. & Richter, D.) 20P
Brain, selective inhibitors of esterases of (Myers, D. K., Kemp, A. jun., Tol, J. W. & Jonge, M. H. T. de) 232
Brain tissue, normal and pathological, localization of hydrolytic enzymes in (Naidoo, D. & Pratt, O. E.) 10P
Brain tissues, speed of reactions involving nicotinamide coenzymes in (McIlwain, H. & Tresize, M. A.) 288
Cacao bean, anthocyanin pigments of (Forsyth, W. G. C. & Quesnel, V. C.) 177
Candida species, glucose metabolism in (Ramachandran, K. & Walker, T. K.) 20
Carbohydrate, protein-bound, in relation to tissue breakdown and regeneration (Keyser, J. W., Jenkins, W. J., Lloyd, G. H. T., Pallis, C. & Sanders, P. G.) 37P
'Carboxymethylcellulase' and cellobiase, differentiation of, by glucono-1:4-lactone (Festenstein, G. N.) 23P
Carboxypeptidase, action of, on hypertensin (Elliott, D. F. & Peart, W. S.) 246
β-Carotene in flowers of *Narcissus* (Booth, V. H.) 660
β-Carotene metabolism, provitamin A activity of possible intermediates in (Fazakerley, S. & Glover, J.) 38P
Carrageenin, connective tissue growth stimulated by (Slack, H. G. B.) 459
Carrageenin, stimulation of connective tissue growth by (Jackson, D. S.) 277
Casein, dephosphorylated, amino acids of (Sundararajan, T. A. & Sarma, P. S.) 261
Casein, enzymic dephosphorylation of (Sundararajan, T. A. & Sarma, P. S.) 261
Catechin, polyphenoloxidase oxidation of (Hathway, D. E. & Seakins, J. W. T.) 32P
§Cell membranes and their derivatives, ultrastructure of (Robertson, J. D.) 43P
Cellobiase and 'carboxymethylcellulase', differentiation of, by glucono-1:4-lactone (Festenstein, G. N.) 23P
Cerebral tissue, *in vitro* resynthesis of energy-rich phosphates in (Thomas, J.) 8P
Cerebral tissue, phosphates from, which increase in radioactivity in the presence of $^{32}PO_4$ during passage of electrical pulses (Heald, P. J.) 3P
Cerebral tissues, glutathione and glutathione reductase in (McIlwain, H., Martin, H. & Tresize, M. A.) 2P
Cerebrospinal fluid, estimation of ascorbic acid and its oxidized forms in (Sloane-Stanley, G. H.) 11P
β-Chloromuconic acid, formation of, by a soil micro-organism (Evans, W. C. & Moss, P.) 8P
p-Chlorophenoxyacetic acid, metabolism of, by a soil micro-organism (Evans, W. C. & Moss, P.) 8P
Cholesterol and liver vitamin A in male and female rats (Green, B., Horner, A. A., Lowe, J. S. & Morton, R. A.) 33P
Cholesterol, chemical degradation of rings C and D of (Cornforth, J. W., Gore, I. Youhotsky & Popják, G.) 94
Cholesterol, effect of, on growth and fat synthesis in housefly larvae (Levinson, Z. H. & Bergmann, E. D.) 254
Cholic acid, activation of, by adenosine triphosphate (Elliott, W. H.) 315
Choline, relation of glycerylphosphorylcholine and phosphorylcholine in semen to (Dawson, R. M. C., Mann, T. & White, I. G.) 627
Cholinesterase activity *in vivo*, effect of persistence of inhibitor on rate of return of, after injection with different dimethyl phosphate esters (Vandekar, M.) 1P
Chondroitin sulphate from hyaline cartilage, new amino sugar in acid hydrolysates of (Muir, H.) 33P
Chondroitinase and chondrosulphatase systems of *Proteus vulgaris*, separation of (Dodgson, K. S. & Lloyd, A. G.) 4P
Chondrosulphatase and chondroitinase systems of *Proteus vulgaris*, separation of (Dodgson, K. S. & Lloyd, A. G.) 4P
Chondrosulphatase of *Proteus vulgaris* (Dodgson, K. S., Lloyd, A. G. & Spencer, B.) 131
Chymotrypsin, action of, on hypertensin (Elliott, D. F. & Peart, W. S.) 246
*iso*Citrate and associated phosphorylations, oxidation of (Vignais, Paulette, Vignais, P. & Bartley, W.) 396
Claviceps purpurea, biosynthesis of ergothioneine by (Wildy, J. & Heath, H.) 220

Clostridium welchii, decomposition of H substance by an enzyme from (Buchanan, D. J., Crumpton, M. J. & Morgan, W. T. J.) 186
Clotting time of rat plasma, effect of a phosphatidase from *Bacillus cereus* on (Robinson, D. S., Harris, P. M. & Poole, J. C. F.) 38P
Collagen, fish, amino acid composition of (Eastoe, J. E.) 363
Collagen, formation and removal of (Jackson, D. S.) 277
Connective tissue growth stimulated by carrageenin (Slack, H. G. B.) 459
Copper ions, role of, in reduction of phosphomolybdate by ascorbic acid (Peel, J. L. & Loughman, B. C.) 709
Corticosterone, urinary excretion of, in normal and pathological conditions (Ayres, P. J., Garrod, O., Simpson, S. A. & Tait, J. F.) 639
Cortisol, urinary excretion of, in normal and pathological conditions (Ayres, P. J., Garrod, O., Simpson, S. A. & Tait, J. F.) 639
Creatine, chromatography of, in extracts of echinoids (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 612
Creatine, enzymic phosphorylation of, by extracts of annelids (Hobson, G. E. & Rees, K. R.) 305
[^{3}H]Cystine, use of, in study of mechanism of penicillin biosynthesis (Arnstein, H. R. V. & Crawhall, J. C.) 18P
§Cytochemical staining methods for study of intracellular enzyme distributions, principles and potentialities of (Holt, S. J.) 43P
Cytochrome, soluble, isolation and purification of, from *Pseudomonas fluorescens* (Kogut, M.) 35P

Decarboxylases, L-amino acid, effects of phosphates, arsenates and nucleotides on (Eggleston, L. V.) 735
Dehydrogenase, glutamic acid, of *Neurospora crassa* (Fincham, J. R. S.) 721
Dehydrogenase, 6-phosphogluconate, from *Escherichia coli* (Scott, D. B. McNair & Cohen, S. S.) 686
Deoxyribonucleic acid synthesis in bacteriophage-infected *Escherichia coli* (Crawford, L. V.) 17P
Diabetes, metabolism of sorbitol in human subject with (Adcock, L. H. & Gray, C. H.) 554
Diaminopimelic acid decarboxylase, distribution of, among bacteria (Antia, M., Hoare, D. S. & Work, E.) 448
αε-Diaminopimelic acid metabolism and sporulation in *Bacillus sphaericus* (Powell, J. F. & Strange, R. E.) 700
Diaminopimelic acid racemase, properties and distribution of (Antia, M., Hoare, D. S. & Work, E.) 448
αε-Diaminopimelic acid, stereoisomers of (Antia, M., Hoare, D. S. & Work, E.) 448; (Hoare, D. S. & Work, E.) 441
Diaphragm, rat, influence of insulin on free and fixed glycogen in (Kits van Heijningen, A. J. M.) 111
Diazonium compounds, reactions of, with amino acids and proteins (Howard, A. N. & Wild, F.) 651
Dichloroethyl sulphone-treated proteins, fate of, on injection (Francis, G. E. & Hawkins, J. D.) 570
Dichloronitrobenzene, 2:4-, 2:5- and 3:4-, metabolism of, in rabbit (Bray, H. G., James, S. P. & Thorpe, W. V.) 483
Diethyl disulphide, metabolism of, in mouse, guinea pig and rabbit (Snow, G. A.) 77
Diglucuronide giving direct van den Bergh reaction, excretion of bilirubin as (Billing, B. H., Cole, P. G. & Lathe, G. H.) 774
NN'-Dicyclohexylcarbodiimide, preparation of (Lowenstein, J. M.) 197
NN'-Dicyclohexylthiourea, preparation of (Lowenstein, J. M.) 197
Dihydroxydi-(*p*-azophenylarsonic acid)-benzene, Ouchterlony gel plate precipitates with (Feinberg, J. G. & Grant, R. A.) 40P
Dimefox, conversion of, into an anticholinesterase by rat liver *in vitro* (Fenwick, M. L., Barron, J. R. & Watson, W. A.) 58
Dimethyl phosphate esters, effect of persistence of inhibitor on rate of return of cholinesterase activity *in vivo* after injection with (Vandekar, M.) 1P
Dimethylnitrosamine, inhibition of uptake of labelled amino acids into liver protein *in vivo* by (Magee, P. N.) 31P
(−)-4:8-Dimethylnon-2-en-1-al semicarbazone, synthesis of (Cornforth, J. W., Gore, I. Youhotsky & Popják, G.) 94
2:4-Dinitrophenol, action of, on myosin and mitochondrial adenosine triphosphatase systems (Perry, S. V. & Chappell, J. B.) 469
Diphosphopyridine nucleotide, oxidized and reduced, levels of, in tumours (Glock, G. E. & McLean, P.) 413

Echinoids, distribution of guanidines, phosphagens and *N*-amidino phosphokinases in (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 612
Egg phospholipids, hen, composition of (Rhodes, D. N. & Lea, C. H.) 526
Electrophoresis, zone, new supporting medium for (Kohn, J.) 9P
§Enzyme distributions, intracellular, principles and potentialities of cytochemical staining methods for study of (Holt, S. J.) 43P
§Enzymes within animal cells, distribution and interaction of (Ernster, L.) 44P
Ergothioneine, biosynthesis of, by *Claviceps purpurea* (Wildy, J. & Heath, H.) 220
Ergothioneine, seminal, of pig, isolation of and studies on (Heath, H., Rimington, C. & Mann, T.) 369
Erythrocytes, intact, oxidation and reduction of glutathione in (Klebanoff, S. J.) 423
Escherichia coli, bacteriophage-infected, deoxyribonucleic acid synthesis in (Crawford, L. V.) 17P
Escherichia coli, enzymic transfer of ribosyl group from inosine to adenine by extracts of (Ott, J. L. & Werkman, C. H.) 609
Escherichia coli, isolation and identification of ribulose phosphate produced from 6-phosphogluconate by dehydrogenase of (Scott, D. B. McNair & Cohen, S. S.) 686
Escherichia coli, nature of fluctuating ribonucleic acid in (Wade, H. E. & Morgan, D. M.) 321
Esterases of brain and saprophytic mycobacteria, selective inhibitors of (Myers, D. K., Kemp, A. jun., Tol, J. W. & Jonge, M. H. T. de) 232
Esterases of saprophytic mycobacteria, substrate specificity of (Myers, D. K., Tol, J. W. & Jonge, M. H. T. de) 223
Ethanethiol, metabolism of compounds related to (Snow, G. A.) 77
S-Ethyl thiolbenzoate, metabolism of, in mouse and guinea pig (Snow, G. A.) 77
N-Ethylmaleimide, reaction of, with glutathione (Kermack, W. O. & Matheson, N. A.) 45
Exponential curves, multiple, electrical analogue for analysis of (Bernstein, L. & Weatherall, M.) 41P

Fatty acid composition of sterol esters and triglycerides in plasma of lactating cows (Lough, A. K., Garton, G. A. & Duncan, W. R. H.) 31P
Fatty acid synthesis by larva of housefly (Levinson, Z. H. & Bergmann, E. D.) 254
Fatty acids, C_6–C_{12}, separation of, by reversed-phase partition chromatography (Wittenberg, J. B.) 42
Fatty acids, metabolism of, with glucose by sheep-rumen epithelial tissue (Pennington, R. J. & Pfander, W. H.) 109
Fatty acids, synthesis of, from acetate by an enzyme system from mammary gland (Hele, P., Popják, G. & Lauryssens, M.) 348

Fatty acids, volatile, formed from dried grass by action of rumen liquor in artificial rumen, distribution of (Barnett, A. J. G. & Reid, R. L.) 13P
Fish collagen, amino acid composition of (Eastoe, J. E.) 363
Fish gelatin, amino acid composition of (Eastoe, J. E.) 363
Fluorimeter, single-beam, stable, covering excitation wavelengths less than 365 mμ (Laurence, D. J. R.) 27P
Frog liver, sulphate conjugation with ranol and other steroid alcohols in homogenates of (Bridgwater, R. J. & Ryan, D. A.) 24P
Frog skin, active ion transport under anaerobic conditions in (Leaf, A. & Renshaw, A.) 90
Frog skin, ion transport and respiration of (Leaf, A. & Renshaw, A.) 82
Fructose formation in goat placenta (Neil, M. W., Walker, D. G. & Warren, F. L.) 35P
Fucose, enzymic liberation of, from H substance (Buchanan, D. J., Crumpton, M. J. & Morgan, W. T. J.) 186
Fujita's equation, measurement of diffusion coefficient of bovine albumin by (Baldwin, R. L.) 503

L-Galactono-γ-lactone dehydrogenase, partially purified, properties of (Mapson, L. W. & Breslow, E.) 29P
3-β-D-Galactosidyl cyanidin from cacao bean (Forsyth, W. G. C. & Quesnel, V. C.) 177
Gelatin, fish, amino acid composition of (Eastoe, J. E.) 363
Geranic acid, separation of, by reversed-phase partition chromatography (Wittenberg, J. B.) 42
Glucono-1:4-lactone, differentiation of cellobiase and 'carboxymethylcellulase' by (Festenstein, G. N.) 23P
Glucose, conversion of, into alanine and glutamic acid by rat liver, liver tumour and kidney *in vivo* (Campbell, P. N. & Halliday, J. W.) 28
Glucose in amino acid–glucose interactions, effect of initial pH on behaviour of (Lewin, S.) 30P
Glucose, interaction of glycylglycine with (Lewin, S. & McCall, J. S.) 30P
Glucose metabolism in *Candida* species (Ramachandran, K. & Walker, T. K.) 20
Glucose, metabolism of, with fatty acids by sheep-rumen epithelial tissue (Pennington, R. J. & Pfander, W. H.) 109
Glucosidases, specific inhibitors of (Conchie, J. & Levvy, G. A.) 389
β-Glucosidases, transglycosylation reactions catalysed by (Crook, E. M. & Stone, B. A.) 1
β-Glucosides, enzymic hydrolysis of (Crook, E. M. & Stone, B. A.) 1
β-Glucuronidase activity in lymphatic tissues of rat after X-ray irradiation of whole body (Pellegrino, C. & Villani, G.) 599
β-Glucuronidase, inhibition and activation of, in urine (Abul-Fadl, M. A. M.) 16P
β-Glucuronidase, inhibitors of (Levvy, G. A., Hay, A. J. & Marsh, C. A.) 203
β-Glucuronidase, 4-methylumbelliferone glucuronide as substrate for (Levvy, G. A., Hay, A. J. & Marsh, C. A.) 203
β-Glucuronidase, specific inhibitors of (Conchie, J. & Levvy, G. A.) 389
Glutamic acid dehydrogenase, modified, produced by gene mutation in *Neurospora crassa* (Fincham, J. R. S.) 721
Glutamic acid, formation of, from glucose by rat liver, liver tumour and kidney *in vivo* (Campbell, P. N. & Halliday, J. W.) 28
Glutamic acid, glutamyl peptides and related compounds, accumulation of, by *Staphylococcus aureus* (Rowlands, D. A., Gale, E. F., Folkes, J. P. & Marrian, D. H.) 519
Glutamine, source of ammonia formed by rat-brain particles (Blumsom, N. L.) 138
α-L-Glutamyl-L-alanine, synthesis of (Rowlands, D. A. & Young, G. T.) 516
γ-DL-Glutamylalanylglycine, synthesis of (Kermack, W. O. & Matheson, N. A.) 45
α-L-Glutamyl-α-L-glutamyl-L-glutamic acid, synthesis of (Rowlands, D. A. & Young, G. T.) 516
γ-DL-Glutamylglycylglycine, synthesis of (Kermack, W. O. & Matheson, N. A.) 45
Glutamylpeptides, α- and γ-, synthesis of (Rowlands, D. A. & Young, G. T.) 516
Glutathione and glutathione reductase in cerebral tissues (McIlwain, H., Martin, H. & Tresize, M. A.) 2P
Glutathione, effects of some analogues of, on glyoxalase system (Kermack, W. O. & Matheson, N. A.) 48
Glutathione in intact erythrocytes, oxidation and reduction of (Klebanoff, S. J.) 423
Glutathione, isolation of, on Dowex 1 ion-exchange resin (Campbell, P. N. & Halliday, J. W.) 28
Glutathione, synthesis of analogues of (Kermack, W. O. & Matheson, N. A.) 45
Glycerol metabolism by spermatozoa (Mann, T. & White, I. G.) 634
Glycerylphosphorylcholine diesterase activity of nervous tissue (Webster, G. R., Marples, E. A. & Thompson, R. H. S.) 374
Glycerylphosphorylcholine in semen, and its relation to choline (Dawson, R. M. C., Mann, T. & White, I. G.) 627
[α-^{14}C]Glycine, incorporation of, into collagen (Jackson, D. S.) 277
Glycine levels, tissue, influence of benzoate administration on (Simkin, J. L. & White, K.) 574
Glycine, synthesis of serine from, intermediates in (Blakley, R. L.) 331
Glycocyamine, enzymic phosphorylation of, by extracts of annelids (Hobson, G. E. & Rees, K. R.) 305
Glycogen, free and fixed, influence of insulin on, in rat diaphragm (Kits van Heijningen, A. J. M.) 111
Glycosidases, selective inhibition of, by corresponding aldonolactones (Conchie, J. & Levvy, G. A.) 389
Glycylglycine, interaction of, with glucose (Lewin, S. & McCall, J. S.) 30P
Glyoxalase system, effects of some analogues of glutathione on (Kermack, W. O. & Matheson, N. A.) 48
Gramicidin S, a crystallographic study of derivatives of (Schmidt, G. M. J., Hodgkin, D. Crowfoot & Oughton, B. M.) 744
Gramicidin S, possible molecular models for (Hodgkin, D. Crowfoot & Oughton, B. M.) 752
Gramicidin S, preparation of derivatives of (Synge, R. L. M.) 750
Granulation tissue, utilization of inorganic sulphate by (Loewi, G. & Kent, P. W.) 550
Grass, dried, distribution of volatile fatty acids formed from, by action of rumen liquor in artificial rumen (Barnett, A. J. G. & Reid, R. L.) 13P
Guanidines, distribution of, in echinoids (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 612
Guanine, replacement of, by 8-azaguanine during nucleic acid biosynthesis in *Bacillus cereus* (Mandel, H. G. & Markham, R.) 25P
Gyrostoma sp., lipids of (Rajagopal, M. V. & Sohonie, K.) 34

H substance, decomposition of, by an enzyme from *Clostridium welchii* (Buchanan, D. J., Crumpton, M. J. & Morgan, W. T. J.) 186
Haem pigments of cytoplasmic particles from non-photosynthetic plant tissues (Martin, E. M. & Morton, R. K.) 404
Haemoglobin, properties of, in sickle-cell anaemia (Allison, A. C.) 212

Haemoglobin, sickle-cell, sulphydryl groups of (Ingram, V. M.) 760
Haemoglobin types in British breeds of sheep (Evans, J. V., Harris, H. & Warren, F. L.) 42P
n-Heptadecanoic acid, occurrence of, in unhydrogenated mutton fat (Hansen, R. P., Shorland, F. B. & Cooke, N. J.) 18
[^{14}C]Hexachloroethane, metabolism of (Jondorf, W. R., Parke, D. V. & Williams, R. T.) 14P
Hippuric acid, formation of (Simkin, J. L. & White, K.) 574
[2-^{14}C]Histamine, non-utilization of, by *Claviceps purpurea* for ergothioneine synthesis (Wildy, J. & Heath, H.) 220
Horse-dandruff allergen, isolation and identification of (Stanworth, D. R.) 582
Housefly, steroid utilization and fatty acid synthesis by larva of (Levinson, Z. H. & Bergmann, E. D.) 254
Hyaline cartilage, new amino sugar in acid hydrolysates of chondroitin sulphate from (Muir, H.) 33P
17aβ-Hydroxy-17α-methyl-5α-*D*-homoandrostan-3-one ('uranolone'), urinary excretion of, by pregnant mare (Brooks, R. V. & Klyne, W.) 663
16α-Hydroxyoestrone, isolation of, from urine of pregnant women (Marrian, G. F., Watson, E. J. D. & Panattoni, M.) 12
5-Hydroxytryptophan, site of formation of (Dalgliesh, C. E. & Dutton, R. W.) 21P
Hydroxyvaline and valine, comparison of, as penicillin precursors (Arnstein, H. R. V. & Clubb, M. E.) 618
DL-β-Hydroxy[*carboxy*-^{14}C]valine, synthesis of (Arnstein, H. R. V. & Clubb, M. E.) 618
Hypertensin, amino acid sequence in (Elliott, D. F. & Peart, W. S.) 246

3-Indolylacetaldehyde, oxidation of tryptamine to, by plant amine oxidase (Clarke, A. J. & Mann, P. J. G.) 763
Inosine, enzymic transfer of ribosyl group from, to adenine by *Escherichia coli* (Ott, J. L. & Werkman, C. H.) 609
*meso*Inositol in lens of mammalian eyes (van Heyningen, R.) 24
Insulin, influence of, on free and fixed glycogen in rat diaphragm (Kits van Heijningen, A. J. M.) 111
Insulin monolayers, interaction of, with polysilicic acid (Holt, P. F. & Went, C. W.) 13P
Intestine, small, of rat, perfusion of lumen of (Neil, M. W.) 41P
Iodinated proteins, fate of, on injection (Francis, G. E. & Hawkins, J. D.) 570
Iodine, radioactive, antigens labelled with (Francis, G. E., Hawkins, J. D. & Wormall, A.) 560
Ion transport, effect of neurohypophyseal preparations on, in frog skin (Leaf, A. & Renshaw, A.) 82
Ion transport, occurrence of, under anaerobic conditions in isolated frog skin (Leaf, A. & Renshaw, A.) 90
Ion transport, relationship of, to respiration in isolated frog skin (Leaf, A. & Renshaw, A.) 82

Kidney, *in vivo* conversion of glucose into alanine and glutamic acid by (Campbell, P. N. & Halliday, J. W.) 28
Kober chromogen, ketonic dihydroxy, isolation of, from urine of pregnant women (Marrian, G. F., Watson, E. J. D. & Panattoni, M.) 12

α-Lactalbumin, crystalline, preparation of, from cow's milk (Aschaffenburg, R. & Drewry, J.) 273
β-Lactoglobulin, bovine, application of measurement of standard deviation of sedimentation-coefficient distribution to (Baldwin, R. L.) 490
β-Lactoglobulin, crystalline, preparation of, from cow's milk (Aschaffenburg, R. & Drewry, J.) 273
Lens of mammalian eyes, *meso*inositol in (van Heyningen, R.) 24
L-Leucyl-α-L-glutamyl-L-leucine, synthesis of (Rowlands, D. A. & Young, G. T.) 516
Limpet β-glucuronidase, properties of (Levvy, G. A., Hay, A. J. & Marsh, C. A.) 203
Lipids of rabbit, composition of (Futter, J. H. & Shorland, F. B.) 689
Liver cells, respiration rate of, at low oxygen concentrations (Longmuir, I. S.) 378
§Liver injury, changes in cellular components in (Judah, J. D. & Rees, K. R.) 45P
Liver microsomes, breakdown of adenosine triphosphate accompanying activation of cholic acid by (Elliott, W. H.) 315
Liver microsomes, incorporation of amino acids into proteins of (Simkin, J. L. & Work, T. S.) 307
Liver mitochondria, phosphorylation quotient in, and *iso*-citrate oxidation by (Vignais, Paulette, Vignais, P. & Bartley, W.) 396
Liver, normal and cancerous, *in vivo* conversion of glucose into alanine and glutamic acid by (Campbell, P. N. & Halliday, J. W.) 28
Liver protein *in vivo*, inhibition of uptake of labelled amino acids into, by dimethylnitrosamine (Magee, P. N.) 31P
Liver, rat, conversion *in vitro* of dimefox into an anti-cholinesterase by (Fenwick, M. L., Barron, J. R. & Watson, W. A.) 58
Lymphatic tissues of rat, β-glucuronidase activity in, after X-ray irradiation of whole body (Pellegrino, C. & Villani, G.) 599

Mammary gland, synthesis of fatty acids from acetate by an enzyme system from (Hele, P., Popják, G. & Lauryssens, M.) 348
Manganese, relation of oxidation of, to peroxidase (Kenten, R. H. & Mann, P. J. G.) 179
Manganese, role of, in plant nutrition (Kenten, R. H. & Mann, P. J. G.) 179
Manganous ions, non-enzymic transphosphorylation catalysed by (Lowenstein, J. M.) 40P
Mannitol from *Aspergillus versicolor* (Birkinshaw, J. H. & Hammady, I. M. M.) 162
α-Mannosidase in mammalian tissues (Conchie, J., Findlay, J. & Levvy, G. A.) 18P
Margaric acid *see n*-Heptadecanoic acid
Mealworm, free amino acids and citrate in blood of (Patterson, D. S. P.) 729
Membranes, porous, electrical migration of peptides and proteins inside (Synge, R. L. M.) 266
Metaphosphatase activity of pea extracts (Pierpoint, W. S.) 67
[^{35}S]Methionine, incorporation of, into ergothioneine by *Claviceps purpurea* (Wildy, J. & Heath, H.) 220
[^{35}S]Methionine, incorporation of, into protein fractions of rat brain (Clouet, D. E. & Richter, D.) 20P
(+)-14-Methylhexadecanoic acid, metabolism of, in rat (Livingston, M., Bell, M. E., Shorland, F. B., Gerson, T. & Hansen, R. P.) 438
(+)-12-Methyltetradecanoic acid, isolation of, from rats fed on (+)-14-methyltetradecanoic acid (Livingston, M., Bell, M. E., Shorland, F. B., Gerson, T. & Hansen, R. P.) 438
Metmyoglobin, acidic, ionization of (George, P. & Hanania, G. I. H.) 756
§Micro-organisms, structure and function in (Mitchell, P.) 44P
Microsomes, liver, breakdown of adenosine triphosphate accompanying activation of cholic acid by (Elliott, W. H.) 315
Microsomes, liver, incorporation of amino acids into proteins of (Simkin, J. L. & Work, T. S.) 307
Milk, cow's, preparation of crystalline β-lactoglobulin and α-lactalbumin from (Aschaffenburg, R. & Drewry, J.) 273

Mitochondria, liver, phosphorylation quotient in, and *iso*-citrate oxidation by (Vignais, Paulette, Vignais, P. & Bartley, W.) 396
Moccasin-venom phospholipase *A*, action of, on ovolecithin (Long, C. & Penny, I. F.) 382
Mucopolysaccharase activity of *Proteus vulgaris* (Dodgson, K. S., Lloyd, A. G. & Spencer, B.) 131
Musca vicina see Housefly
Muscle, skeletal, analytical procedure for acid-soluble phosphorus compounds in (Threlfall, C. J.) 694
Mutton fat, unhydrogenated, occurrence of *n*-heptadecanoic acid in (Hansen, R. P., Shorland, F. B. & Cooke, N. J.) 18
Mycobacteria, hydrolysis of amides by extracts from (Halpern, Y. S. & Grossowicz, N.) 716
Mycobacteria, saprophytic, selective inhibitors of esterases of (Myers, D. K., Kemp, A. jun., Tol, J. W. & Jonge, M. H. T. de) 232
Mycobacteria, saprophytic, substrate specificity of esterases of (Myers, D. K., Tol, J. W. & Jonge, M. H. T. de) 223
Mycobacterium phlei and *M. tuberculosis* var. *bovis*, hydrolysis of amides by extracts from (Halpern, Y. S. & Grossowicz, N.) 716
Mycoderma see Candida
Myosin and adenosine triphosphatase, action of 2:4-dinitrophenol on (Perry, S. V. & Chappell, J. B.) 469

Narcissus, β-carotene in flowers of (Booth, V. H.) 660
Nervous tissue, glycerylphosphorylcholine diesterase activity of (Webster, G. R., Marples, E. A. & Thompson, R. H. S.) 374
Neurohypophysis, effect of preparations from, on ion transport in frog skin (Leaf, A. & Renshaw, A.) 82
Neurospora crassa, glutamic acid dehydrogenase of (Fincham, J. R. S.) 721
Nicotinamide coenzymes, speed of cerebral reactions involving (McIlwain, H. & Tresize, M. A.) 288
Nisin, improved method for preparation of (Cheeseman, G. C. & Berridge, N. J.) 603
Nitrite oxidation by *Nitrobacter* (Lees, H. & Simpson, J. R.) 297
Nitrobacter, nitrite oxidation by (Lees, H. & Simpson, J. R.) 297
Nucleic acid biosynthesis in *Bacillus cereus*, replacement of guanine by 8-azaguanine during (Mandel, H. G. & Markham, R.) 25P
Nucleic acid content of rat uterus in different states (Needham, D. M. & Cawkwell, J. M.) 540
Nucleotides, effect of, on L-amino acid decarboxylases (Eggleston, L. V.) 735

Oestrogens, isolation of, from urine of pregnant women (Marrian, G. F., Watson, E. J. D. & Panattoni, M.) 12
Ornithuric acid formation in reptiles (Smith, J. N.) 19P
Ouchterlony gel plate precipitates with dihydroxydi-(*p*-azophenylarsonic acid)-benzene (Feinberg, J. G. & Grant, R. A.) 40P
Ouchterlony plates, specific absorption with line extinction in (Feinberg, J. G.) 40P
Ovolecithin, action of moccasin-venom phospholipase *A* on (Long, C. & Penny, I. F.) 382
Δ^4-3-Oxo steroids, fluorescence method for microanalysis of, on paper chromatograms (Ayres, P. J., Simpson, S. A. & Tait, J. F.) 647
Oxygen concentrations, low, respiration rate of liver cells at (Longmuir, I. S.) 378

Patella vulgata, properties of β-glucuronidase of (Levvy, G. A., Hay, A. J. & Marsh, C. A.) 203
Pea, phosphatase of (Pierpoint, W. S.) 67
Pea plant (*Pisum sativum* L.) grown under conditions of manganese toxicity, manganese oxidation in (Kenten, R. H. & Mann, P. J. G.) 179
Penicillin biosynthesis, mechanism of, studied with [α-^{3}H]- or [β-^{3}H]-cystine (Arnstein, H. R. V. & Crawhall, J. C.) 18P
Penicillin precursors, comparison of valine and hydroxyvaline as (Arnstein, H. R. V. & Clubb, M. E.) 618
Penicillium atrovenetum, metabolites of (Neill, K. G. & Raistrick, H.) 166
Penicillium chrysogenum, biosynthesis of penicillin by (Arnstein, H. R. V. & Clubb, M. E.) 618
Peptides, electrical migration of, inside porous membranes (Synge, R. L. M.) 266
Peptides, occurrence of, in liver (Campbell, P. N. & Halliday, J. W.) 28
Phenoxy-*n*-alkylcarboxylic acids, metabolism of, by *Aspergillus niger* (Byrde, R. J. W. & Woodcock, D.) 682
Phenyl phosphate, kinetics of hydrolysis of, by alkaline phosphatases (Morton, R. K.) 674
Phenylacetylene, metabolism of (El Masry, A. M., Smith, J. N. & Williams, R. T.) 19P
Phenylethylene, metabolism of (El Masry, A. M., Smith, J. N. & Williams, R. T.) 19P
[^{14}C]Phenylhydrazine, fate of, in rabbit (McIsaac, W. M., Parke, D. V. & Williams, R. T.) 15P
Phosphagens, distribution of, in echinoids (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 612
Phosphatase activity of pea extracts (Pierpoint, W. S.) 67
Phosphatases, alkaline, kinetics of hydrolysis of phenyl phosphate by (Morton, R. K.) 674
Phosphates, effect of, on L-amino acid decarboxylases (Eggleston, L. V.) 735
Phosphates, energy-rich, *in vitro* resynthesis of, in cerebral tissue (Thomas, J.) 8P
Phosphates from cerebral tissue which increase in radioactivity in presence of $^{32}PO_4$ during passage of electrical pulses (Heald, P. J.) 3P
Phosphatidase from *Bacillus cereus*, effect of, on clotting time of rat plasma (Robinson, D. S., Harris, P. M. & Poole, J. C. F.) 38P
6-Phosphogluconate, isolation and identification of ribulose phosphate produced from, by dehydrogenase of *Escherichia coli* (Scott, D. B. McNair & Cohen, S. S.) 686
Phosphoglucose isomerase, competitive inhibitors of (Parr, C. W.) 34P
Phosphoglycerides, action of moccasin-venom phospholipase *A* on (Long, C. & Penny, I. F.) 382
Phosphokinases, *N*-amidino, distribution of, in echinoids (Griffiths, D. E., Morrison, J. F. & Ennor, A. H.) 612
Phosphokinases, annelid (Hobson, G. E. & Rees, K. R.) 305
Phospholipase *A*, moccasin-venom, action of, on ovolecithin (Long, C. & Penny, I. F.) 382
Phospholipids, brain, turnover of, during anaesthesia, chlorpromazine sedation and convulsions (Ansell, G. B. & Dohmen, H.) 1P
Phospholipids of hen's egg, composition of (Rhodes, D. N. & Lea, C. H.) 526
Phosphomolybdate, reduction of, by cuprous ions (Peel, J. L. & Loughman, B. C.) 709
Phosphoprotein phosphatase, purification of (Sundararajan, T. A. & Sarma, P. S.) 261
Phosphorus compounds, acid-soluble, in skeletal muscle, analytical procedure for (Threlfall, C. J.) 694
Phosphorus, effect of chelating agents on estimation of (Peel, J. L. & Loughman, B. C.) 709
Phosphorus, effect of sulphydryl compounds on estimation of (Peel, J. L. & Loughman, B. C.) 709
Phosphorus uptake by wheat plants, studied with radiochemical methods (Rothbuhr, L. & Scott, F.) 241
Phosphorylcholine in semen, and its relation to choline (Dawson, R. M. C., Mann, T. & White, I. G.) 627
Phthalyl peptides, detection of, on paper chromatograms (Kermack, W. O. & Matheson, N. A.) 45

Placenta, goat, fructose formation in (Neil, M. W., Walker, D. G. & Warren, F. L.) 35P
Polyphenoloxidase oxidation of catechin (Hathway, D. E. & Seakins, J. W. T.) 32P
Polysaccharides, sulphated, metabolism of (Slack, H. G. B.) 459
Polysilicic acid, interaction of insulin monolayers with (Holt, P. F. & Went, C. W.) 13P
Porphyrin biosynthesis in human red cells (Rimington, C. & Booij, H. L.) 3P
Porphyrin synthesis by red cells, effect of pre-heating on (Booij, H. L. & Rimington, C.) 4P
Potassium movement in sheep blood cells (Joyce, C. R. B. & Weatherall, M.) 6P
[16-^{3}H]Progesterone metabolism, comparative study of, in pregnant and non-pregnant women (Pearlman, W. H.) 7P
Propionate, effects of, upon acetate metabolism in animal tissue slices (Pennington, R. J.) 534
Protein antigens, chemically modified, fate of, in normal and immune rabbits (Francis, G. E. & Hawkins, J. D.) 570
Protein composition of rat uterus in different states (Needham, D. M. & Cawkwell, J. M.) 540
Protein structure, relation of possible molecular models for gramicidin S to (Hodgkin, D. Crowfoot & Oughton, B. M.) 752
Protein, synthesis of, in guinea-pig liver (Simkin, J. L. & Work, T. S.) 307
Proteins, dichloroethyl sulphone-treated, fate of, on injection (Francis, G. E. & Hawkins, J. D.) 570
Proteins, electrical migration of, inside porous membranes (Synge, R. L. M.) 266
Proteins, iodinated, fate of, on injection (Francis, G. E. & Hawkins, J. D.) 570
Proteins, native, intravenously injected, fate of, in normal and immune rabbits (Francis, G. E., Hawkins, J. D. & Wormall, A.) 560
Proteins, reaction of diazonium compounds with (Howard, A. N. & Wild, F.) 651
Proteins, serum, in relation to tissue breakdown and regeneration (Keyser, J. W., Jenkins, W. J., Lloyd, G. H. T., Pallis, C. & Sanders, P. G.) 37P
Proteus vulgaris, chondrosulphatase of (Dodgson, K. S., Lloyd, A. G. & Spencer, B.) 131
Provitamin A activity of possible intermediates in β-carotene metabolism (Fazakerley, S. & Glover, J.) 38P
Pseudomonas fluorescens, isolation and purification of soluble cytochrome from (Kogut, M.) 35P
Pteridines, formation of, from purines (Albert, A.) 124
Pteroyl-L-glutamic acid, observations on oxidative degradation of (Blair, J. A.) 209
Pteroylglutamic acid, preparation and properties of catalytic derivatives of (Blakley, R. L.) 331
Purines, transformation of, into pteridines (Albert, A.) 124
Pyrophosphatase, inhibition of, by magnesium (Elliott, W. H.) 315
Pyrophosphate, estimation of (Elliott, W. H.) 315
Pyrophosphate, radioactive, preparation of (Lowenstein, J. M.) 197
Pyruvic acid, formation of, by *Candida* (Ramachandran, K. & Walker, T. K.) 20

Rabbit, composition of lipids of (Futter, J. H. & Shorland, F. B.) 689
Rana temporaria, sulphate conjugation with ranol and other steroid alcohols in liver homogenates from (Bridgwater, R. J. & Ryan, D. A.) 24P
Ranol, sulphate conjugation with, in liver homogenates from *Rana temporaria* (Bridgwater, R. J. & Ryan, D. A.) 24P
Reptiles, ornithuric acid formation in (Smith, J. N.) 19P
Respiration rate of liver cells at low oxygen concentrations (Longmuir, I. S.) 378
Ribonucleic acid, nature of, in 12 species of bacteria (Wade, H. E. & Morgan, D. M.) 321
Ribosyl group, enzymic transfer of, from inosine to adenine by *Escherichia coli* (Ott, J. L. & Werkman, C. H.) 609
Ribulose phosphate produced from 6-phosphogluconate by dehydrogenase of *Escherichia coli*, isolation and identification of (Scott, D. B. McNair & Cohen, S. S.) 686
Rodents, common, composition of sebum of (Wheatley, V. R. & James, A. T.) 36
Rumen, artificial, distribution of volatile fatty acids formed from dried grass by action of rumen liquor in (Barnett, A. J. G. & Reid, R. L.) 13P
Rumen epithelial tissue, sheep, metabolism of fatty acids and glucose by (Pennington, R. J. & Pfander, W. H.) 109

Sea anemone (*Gyrostoma* sp.), lipids of (Rajagopal, M. V. & Sohonie, K.) 34
Sebum of some common rodents, composition of (Wheatley, V. R. & James, A. T.) 36
Sedimentation-velocity experiments, boundary spreading in (Baldwin, R. L.) 490, 503
Semen, pig, ergothioneine of (Heath, H., Rimington, C. & Mann, T.) 369
Serine, properties of enzyme system involved in synthesis of (Blakley, R. L.) 342
Serine, synthesis of, from glycine, intermediates in (Blakley, R. L.) 331
Serum, human, arylsulphatase of (Dodgson, K. S. & Spencer, B.) 668
Sheep, haemoglobin types in British breeds of (Evans, J. V., Harris, H. & Warren, F. L.) 42P
Sickle-cell anaemia, properties of haemoglobin in (Allison, A. C.) 212
Sickle-cell haemoglobin, sulphydryl groups of (Ingram, V. M.) 760
Silica, soluble, effect of, on respiration of rat-liver homogenates (Rowsell, E. V. & Leonard, R. A.) 26P
Silicon uptake by wheat plants, studied with radiochemical methods (Rothbuhr, L. & Scott, F.) 241
Snake-venom phospholipase *A*, action of, on ovolecithin (Long, C. & Penny, I. F.) 382
Sodium movement in sheep blood cells (Joyce, C. R. B. & Weatherall, M.) 6P
Sorbitol in human subject, metabolism of (Adcock, L. H. & Gray, C. H.) 554
Sorbitol, uniformly ^{14}C-labelled, metabolism of, in man (Adcock, L. H. & Gray, C. H.) 4P
Spectrophotofluorimeter and double monochromator spectrophotometer, combined (Bartholomew, R. J., Dalgliesh, C. E. & Wootton, I. D. P.) 27P
Spectrophotofluorometer, Aminco–Bowman (Williams, R. T.) 26P
Spermatozoa, glycerol metabolism by (Mann, T. & White, I. G.) 634
Spleen, preparation of a phosphoprotein phosphatase from (Sundararajan, T. A. & Sarma, P. S.) 261
Staphylococcus aureus, accumulation of free glutamic acid within, when incubated with derivatives of glutamic acid (Rowlands, D. A., Gale, E. F., Folkes, J. P. & Marrian, D. H.) 519
Sterigmatocystin, crystalline product from *Aspergillus versicolor*, properties and derivatives of (Birkinshaw, J. H. & Hammady, I. M. M.) 162
*iso*Sterigmatocystin, formation of, from sterigmatocystin (Birkinshaw, J. H. & Hammady, I. M. M.) 162
Steroid conjugates, observations on behaviour of, on alumina (Barlow, J. J.) 34P

Steroid, utilization of, by larva of housefly (Levinson, Z. H. & Bergmann, E. D.) 254
§Subcellular components, structure and function of (symposium) 43P
Sulphate conjugation with ranol and other steroid alcohols in liver homogenates from *Rana temporaria* (Bridgwater, R. J. & Ryan, D. A.) 24P
Sulphate, inorganic, utilization of, by granulation tissue (Loewi, G. & Kent, P. W.) 550
Sulphydryl groups of sickle-cell haemoglobin (Ingram, V. M.) 760
Sulphydryl inhibitors, effect of, on diaminopimelic acid racemase (Antia, M., Hoare, D. S. & Work, E.) 448
§Symposium on: 'Structure and function of subcellular components' 43P

Taurocyamine, enzymic phosphorylation of, by extracts of annelids (Hobson, G. E. & Rees, K. R.) 305
Tenebrio molitor, free amino acids and citrate in blood of (Patterson, D. S. P.) 729
Thiamine, effect of, on glucose metabolism in *Candida* (Ramachandran, K. & Walker, T. K.) 20
Thiols, chromatographic method of analysis for (Price, C. A. & Campbell, C. W.) 512
Tissues, separated, apparatus designed for study of (Ayres, P. J., Buddle, H. L., Heald, P. J., McIlwain, H. & Rodnight, R.) 9P
Toxopyrimidine phosphate, inhibition of B_6-enzymes by (Haughton, B. G. & King, H. K.) 36P
Transhydrogenase from animal tissues, distribution and properties of (Humphrey, G. F.) 546
Transphosphorylation, non-enzymic, catalysed by manganous ions (Lowenstein, J. M.) 40P
Triglycerides in plasma of lactating cows, fatty acid composition of (Lough, A. K., Garton, G. A. & Duncan, W. R. H.) 31P
Triphosphopyridine nucleotide, oxidized and reduced, levels of, in tumours (Glock, G. E. & McLean, P.) 413
Trypsin, action of, on hypertensin (Elliott, D. F. & Peart, W. S.) 246
Tryptamine, oxidation of, to 3-indolylacetaldehyde by plant amine oxidase (Clarke, A. J. & Mann, P. J. G.) 763
Tumours, levels of oxidized and reduced diphosphopyridine nucleotide and triphosphopyridine nucleotide in (Glock, G. E. & McLean, P.) 413

Ultraviolet fluorescence of aromatic amino acids (Teale, F. W. J. & Weber, G.) 476
'Uranolone', structure of (Brooks, R. V. & Klyne, W.) 663
Urine, human, arylsulphatase of (Dodgson, K. S. & Spencer, B.) 668
Urine, human, method for determination of aldosterone, cortisol and corticosterone in (Ayres, P. J., Garrod, O., Simpson, S. A. & Tait, J. F.) 639
Urine, inhibition and activation of β-glucuronidase in (Abul-Fadl, M. A. M.) 16P
Urine, pregnancy, isolation of oestrogens from (Marrian, G. F., Watson, E. J. D. & Panattoni, M.) 12
Urine, pregnant mare's, steroids of (Brooks, R. V. & Klyne, W.) 663
Uterus, rat, in different states, protein composition and nucleic acid content of (Needham, D. M. & Cawkwell, J. M.) 540

Valine and hydroxyvaline, comparison of, as penicillin precursors (Arnstein, H. R. V. & Clubb, M. E.) 618
DL-[^{15}N]Valine, synthesis of (Arnstein, H. R. V. & Clubb, M. E.) 618
L-Valyl-L-glutamic acid, synthesis of (Rowlands, D. A. & Young, G. T.) 516
L-Valyl-α-L-glutamyl-L-valine, synthesis of (Rowlands, D. A. & Young, G. T.) 516
Vitamin A, liver, and cholesterol in male and female rats (Green, B., Horner, A. A., Lowe, J. S. & Morton, R. A.) 33P

Wheat plants, uptake of silicon and phosphorus by, studied with radiochemical methods (Rothbuhr, L. & Scott, F.) 241